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(54) **SEMICONDUCTOR LASER WAFER AND SEMICONDUCTOR LASER**

(57) A semiconductor laser wafer (10) includes a substrate (20), a first semiconductor layer (30), an active layer (40), a second semiconductor layer (50), and a composition evaluation layer (60). The active layer (40) is provided on the first semiconductor layer (30); multiple periods of pairs of a light-emitting multi-quantum well region (86) and an injection multi-quantum well region (88) are stacked in the active layer (40); the light-emitting multi-quantum well region (86) is made of a first compound semiconductor and a second compound semiconductor. The second semiconductor layer (50) is provided on the active layer (40). The composition evaluation layer (60) is provided above the active layer (40) and includes a first film (61) and a second film (62); the first film (61) is made of the first compound semiconductor and has a first thickness; and the second film (62) is made of the second compound semiconductor and has a second thickness.

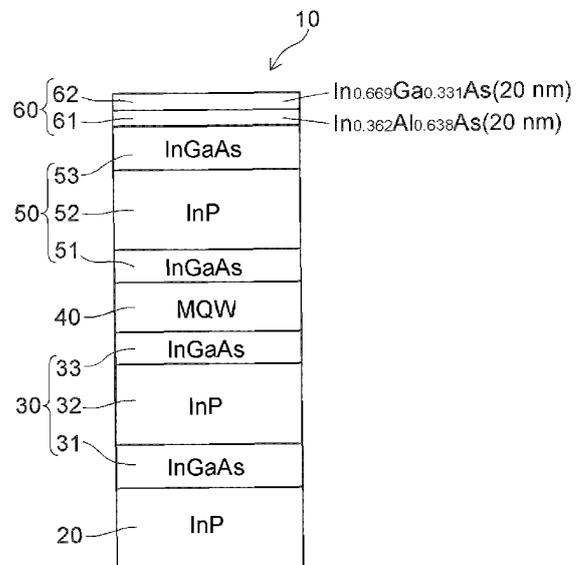


FIG. 1

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PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of subsequent proceedings, as the European search report

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2010/111127 A1 (EDAMURA TADATAKA [JP] ET AL) 6 May 2010 (2010-05-06) * paragraph [0055] - paragraph [0063]; figures 4,5 *	5-8	INV. H01S5/00
A	JP 2018 093023 A (TOSHIBA CORP) 14 June 2018 (2018-06-14) * figures 1b, 3b *	5-8	
A	EP 3 118 949 A1 (TOSHIBA KK [JP]) 18 January 2017 (2017-01-18) * abstract; figure 2 *	5-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			H01S
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.			
Claims searched completely :			
Claims searched incompletely :			
Claims not searched :			
Reason for the limitation of the search: see sheet C			
Place of search		Date of completion of the search	Examiner
Munich		27 October 2020	Flierl, Patrik
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P04E07)

**INCOMPLETE SEARCH
SHEET C**Application Number
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Claim(s) completely searchable:
5-8

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Claim(s) not searched:
1-4

Reason for the limitation of the search:

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In response to the clarification request under Rule 62a EPC the applicant has selected claim 5 and its dependent claims 6-8 to be searched. Therefore the Search Report and the corresponding Search Opinion are established for these claims. Applicants request to also search claims 1-4 is not allowable under Rule 62a.

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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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27-10-2020

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